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EDITED BY WILLIAM HUNTING, F.R.C.V.S.

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DIAGNOSTIC METHODS.

Veterinary Surgeons collectively have shown no great readiness to adopt many physical and chemical aids to diagnosis which are in common use among medical men. Ophthalmoscopy, which many of our members have never once practised, might be cited as an instance. A better one, because much wider and more general in its application, is auscultation and percussion. Many veterinary surgeons auscultate with the unaided ear; and few use instruments for percussion—though in the latter connection it must fairly be said that some of those who have specially studied the subject deliberately prefer digital to instrumental percussion. But, speaking generally, it must be admitted that, except with regard to auscultation of the heart, our members do not pay sufficient attention to auscultation and percussion. Anatomical factors will always limit their value to some extent in veterinary practice; but nevertheless we have not yet fully proved their utility.

Urine testing, again, which is a routine procedure amongst medical men, is practically unheard of in everyday veterinary work. The obvious excuse for this—the difficulty in collecting urine—is by no means an invariably sufficient one. There are many cases in practice in which urine testing is not feasible; but it might be resorted to much more often than it is. In veterinary infirmaries especially there are not a few opportunities; and it may be added that infirmary patients are now chiefly canine, and it is in the case of old dogs that urine testing, if generally adopted, would probably be of most value. Urinology never has received the attention it deserves from veterinary surgeons. A few men in the schools have worked upon it; but it has been practically ignored by the great majority of clinicians. Yet it is one of the subjects which an ordinary clinician might very often work upon with good results.

Considering how speedily we recognised the value of such revolutions in diagnosis as mallein and tuberculin, it seems strange that we should be inclined to disregard these other methods which have long been everyday ones amongst medical men. Should we not do well to consider the adaptability of such procedures to our work. Many of them would require some modification; most would prove of more value than we now suppose. Even cystoscopy, a novel and difficult diagnostic procedure, has been successfully practised upon some animals. Yet there are not a few veterinary surgeons who never use either stethoscope or ophthalmoscope, and never dream of testing the urine.

EQUINE HAY FEVER.

Last summer I attended several horses which appeared to be suffering from a rather uncommon outbreak, although in previous dry seasons I have occasionally treated a few odd cases of a somewhat similar nature.

They did not suffer quite so acutely as those described a few weeks ago in *The Record* by Walther, of Leipzig, but otherwise they were in much the same state. The deep red and swollen condition of the conjunctivae, the slimy and watery discharge from the eyes and thin mucus from the nostrils were all present, as also the general dullness. The cough was not extremely violent in my patients, but I never saw any of them at work or undergoing any exertion, otherwise it might have proved more distressing. The temperature was never more than 103, generally under, and the appetite and circulatory system were only slightly impaired.

They had all been turned out night and day in the neighbourhood of hay and clover fields, and when stabled made a rapid recovery, as a rule in less than a week. A few of them had been turned directly on a portion of the mowing grass, on account of the bareness of the pastures.

Many of the said cases had a great resemblance to Pink-eye—one reason why they received extra observation, especially some which had been standing in a day or two and had consequently filled in the legs, but I had plenty of proof that there was nothing whatever infectious in connection with the lesions.

Dust from motor-cars, smells from sewage and other nuisances were blamed by owners for the mischief, and where nothing of the sort was accessible the changes of temperature—very hot days and cold nights, were thought to have had a good deal of influence, but I strongly believed, and am now more convinced since reading the interesting translation referred to, that the irritation from pollen was the principal cause of the trouble.

A. B. FORSYTH.

ABSTRACTS FROM FOREIGN JOURNALS.

The Transmission of Human Tuberculosis to Cattle.

Since the year 1903, Prof. Eber, of the Veterinary Institute of Leipzig, has carried out several series of experiments bearing upon the question of the unity of species of the tubercle bacillus. The results of the first three series, which were published from 1905 to 1908, showed that the ox may be infected by human tuberculous products derived even from adults, and that this may happen, not only after an intermediate passage through the guinea-pig, but even by the direct inoculation of pure cultures.

Eber has recently published the results of the fourth series of experiments. The infective material which was utilised came from fifteen cases of human tuberculosis, of which eight were cases of surgical tuberculosis, and seven of pulmonary tuberculosis.

The inoculations were carried out upon 54 calves of from three to four months old (not reacting to the tuberculin test), 236 rabbits, and 360 guinea-pigs.

Eber succeeded in transforming bacilli of the human type into those of the bovine type; but he found that the transformation takes place gradually, and is only complete after repeated passages through the ox.

He also found that passage through the guinea-pig facilitates the adaptation of the human bacilli to the organism of the ox. These results distinctly support the view of the unity of species of human and bovine tubercle bacilli, and confirm the findings of the French School (Chauveau, Nocard, Arloing, Cadiot, Gilbert, Rayer, etc.—(*La Semaine Vétérinaire*).

The Passage of Tubercle Bacilli through the Intact Skin.

Konigsfeld (*Zentralbl. f. Bakteriologie*), discusses this question. Animal experiments have shown that tubercle bacilli are able to traverse the uninjured skin. They penetrate by way of the hair follicles and lymphatic clefts, and 7½ hours later they are in the subcutaneous cellular tissue, where they are to be found even 24 hours after the inoculation. After the expiration of (at the longest) four days, they can be demonstrated in the regional lymphatic glands. From these they pass to the internal organs by the lymph or blood stream.

The cutaneous affection fails in the case of bacilli of low virulence, or when only a few bacilli are concerned. No distinction seems to exist between the infection with human tubercle bacilli, and that with perlsucht bacilli, The skin itself seems to possess a great resistance against tuberculous infection.—(*Berliner Tier. Woch.*)

[All this suggests that internal tuberculosis may be due to cutaneous infection, if not often, at least less rarely than we have supposed.—*Transl.*]

An Infectious Disease of Canaries caused by Bacteria of the Para-typhus Group.

Willy Pfeiler reports that, some years ago, he observed a disease in a stock of very well-bred canaries, the cause of which was ascertained to be a bacterium of the para-typhus group.

The disease was extremely infectious, and considerably over a hundred birds succumbed to it. During life, the affected birds showed the depression customarily seen in sick canaries; but the most prominent symptom of illness was a profuse diarrhœa.

Post-mortem, all the birds showed a catarrhal or hæmorrhagic inflammation of the intestinal mucous membrane. Most of them showed, in addition, a fibrinous or sero-fibrinous pleurisy and peritonitis, and hæmorrhages under the epicardium and endocardium. Most birds also showed a striking hyperplasia of the spleen.

Bacteria were found in the blood of the heart and in the organs, and these, when stained by the aniline dyes, presented an extraordinary resemblance to the bacteria of fowl cholera. The organisms grew easily and luxuriantly on the ordinary culture media. Smears from pure cultures showed ovoid bacteria and with them some of somewhat longer appearance, which also had an inclination to bipolar staining. The bacteria were Gram-negative; and, when examined in hanging drop preparations, were actively motile.

Pfeiler undertook a series of biological experiments, of which he gives details and tables, with this bacterium; and proved it to be related to the para-typhus group. He remarks that, as canaries are the housemates of mankind, and often, among canary breeders, hundreds of them live together in one room with human beings, it is possible that such proximity may be dangerous to human health. On that account, he considers his observation of epidemiological interest.—(*Berliner Tier. Woch.*)

W. R. C.

Cerebral Hæmorrhage in a Dog.

A two months old pointer puppy was brought to me in a fit. The breathing was irregular, after a few hurried expirations, a halt followed: the heart's action was similar, now rapid, now slow, pulse imperceptible. The left hind leg alternately with the fore was quickly convulsed. At times there was a convulsive opening of the mouth, champing of the jaw and bending of the head backward, or of the back. There was loss of consciousness, the eyes were open, the pupils did not react to light. The feet were cold. Thinking there was cerebral hæmorrhage I tried treatment, but death occurred in 20 minutes. Before death the symptoms decreased in frequency and severity. P.M. I found two or three drops of blood in the right ventricle of the brain. Afterwards the owner succeeded in learning that the maid servant, whom the puppy worried in play

had thrown it against the wall when it immediately lost consciousness.

V.S. N. Foss, Ufa, Russia.

(Ex. *The Social Veterinary Record* from the author's original Esperanto).

F. E. P.

ENCERBA SANGELFLUO CE HUNDO.

Oni alportis al mi 2monatan hundidon-pojnteron, al kiu jus okazis la nerva paroksizmo pro nekonata kaüzo, daüranta same antaü mi. La spirado-interrompa; post kelkaj oftaj eksopiroj sekvis halto; ankaü la koro, gijen ofte batis, jen malrapidis, la pulso estis ne sentebla. La malantaüa maldekstra piedo, alterne kun la antaüa, rapide ektremadis. Kelkfojojn okazis jen konvulsia malfermo de la buse, jen la ofta salivmacado kaj fleksigo de la kapo malantaüen aü fleksigo de la dorso. Konscio mankis, la ckuloj-malfermitaj, la pupilo ne reagis kontraü lumo, la piedoj-malvarmaj. Konsiderinte, ke okazis encerba sangelfluo, mi faris iajn penojn por savo, sed la morto sekvis post 20 minut. Antaü la morto la nomitaj simptomoj estis ciam pli kaj pli maloftaj kaj malakraj. Post la sekcio mi trovis 2-3 gutojn de sango en la dekstroa ventrikulo de la cerbo.

Jam poste la posedanto sukcesis ekscil, ke servistino, kiun tiu hundido tedis per sia ludo, repusis gin kaj gi alfrapiginte al muro tuj perdis konscion.

Veterinaro N. Foss, Rusujo, Ufa.

El Esperanto tradukis Sro F. E. PLACE.

(Estis presita en la rusa "Informilo de l'socia veterinario.")

NORTH OF SCOTLAND VETERINARY MEDICAL SOCIETY.

The half-yearly meeting was held in the Agricultural Department, Marischal College, on Saturday, Jan. 27th. The following members were present: Messrs. Anderson, Keith; Brown, Banchory; Hepburn, Aberdeen; Howie, Alford; Kerr, Ellon; Murray, Cullen; Morrison, New Deer; Marshall, Aberdeen; McPherson, Huntly (President); McGregor, Old Deer; Sievwright, Tarland; Laing, Turiff.

Apologies for absence were sent by Messrs. Gunn, Peddie, Watson, Bell, and Baxter.

The minutes of last meeting were read and approved

CORRESPONDENCE.

A letter from Mr. Stockman, Board of Agriculture regretting his inability to accept an invitation to come north to deliver an address on Anthrax before the Society

A letter from Mr. Gofton asking the Society to appoint representatives to act on the Council of the reconstructed National Society.

On the motion of Mr. Morrison, seconded by Mr Anderson, and unanimously carried, Mr. McPherson. Huntly, President, and Mr. Howie, Alford, Hon. Sec.,, were appointed.

A letter from the Royal Sanitary Institute inviting delegates to the forthcoming Congress at York was allowed to lie on the table.

The PRESIDENT said that the annual event called the President's inaugural address might, in his opinion, be very well dispensed with, for the reason that it was very difficult for presidents to find anything fresh in the way of veterinary politics to speak about; so much of the same kind being repeated again and again at meetings of the various Societies and published in the veterinary papers.

He would just like to say a word or two about anthrax. He regretted extremely that Mr. Stockman had not been able to accept the Society's invitation to come North to address the members on this subject. He felt quite certain that such a visit to the most anthrax-infested district of Great Britain would have been productive of nothing but good, and would have tended to remove many misunderstandings at present in existence regarding the diagnosis of anthrax.

He stated that he was one of those who recognised that there was a decided difficulty in diagnosing anthrax. He had last summer had several of his diagnoses upset by the Board of Agriculture, and feeling somewhat aggrieved thereat sent duplicate slides to a friend on whose bacteriological knowledge he could depend. In every case the diagnosis of the Board of Agriculture was upheld by his friend. He stated that in his experience cases occurring in summer were more difficult to diagnose than those we get in winter. The heat probably promoting the growth of bacilli, such as those of malignant œdema, and thus confusing the issue.

He counselled the members to have very great patience with the officers of the Board, because they had a very difficult task to perform, though he would admit that it was perhaps a little galling to have one's opinion upset. He thought that we should all do our best to support and assist the Board. For veterinary surgeons were likely to have a lot more to do with the Board of Agriculture in the near future than at present, as there was every likelihood of both tuberculosis and contagious abortion becoming scheduled diseases.

STERILITY.

By Mr. WM. BROWN, M.R.C.V.S., Banchory.

I have chosen this subject for discussion, as it is one which falls in with my special liking. It has received very inadequate attention from both medical men and veterinary surgeons, and the condition is so common amongst animals of the more approved breeds that it causes much loss to those engaged in the breeding industry.

I propose to confine my remarks, more especially to the female, as sterility is perhaps more often found in the female than in the male, and more may be done for the condition in the former than in the latter.

We may define "Sterility" as the incapacity on the part of an animal to reproduce its species. It may be absolute or relative. Absolute when the animal fails to conceive; relative where conception occurs only very occasionally, and where the animal breaks service habitually, or aborts.

Before considering the ætiology of the condition, we might first inquire into the cause of normal heat or œstrum and the conditions which accompany it, in order that we may more clearly follow them pathologically. The physiology of œstrum has only recently been eluci dated. We owe our knowledge of it to the excellent work of Mr. Walter Heape and Dr. Francis Marshall, of Cambridge, which was communicated to the Royal Society in 1900-1903.

In 1865 Pflüger advanced the hypothesis that œstrum was due to a nervous reflex, caused by the pressure of the ripe Graafian follicles on the nerve endings in the ovaries. Goltz, however, in 1874 disproved this by transecting the spinal cord in the lumbar region, and finding that normal œstrum occurred nevertheless. This distinctly proved that œstrum was not nervous in origin.

Brown-Sequard (1889) was the first to show that the ovary, like the testicle, produced an internal secretion into the blood which has an important bearing on meta-

bolism. This secretion, which Starling has named a hormone, is formed continuously, but at certain regular periods is produced more abundantly, and has been proved by Heape and Marshall to be the cause of œstrum. Various extracts from the ovary during an œstrus period have been made and used in human medicine for certain ovarian disorders. These, such as "ovarine" "oophorine" and "ovigenine" when injected in sufficient doses will produce a condition to all appearance like ordinary œstrum, but, to my knowledge, they have not been used on veterinary patients. It has further been shown by Marshall that if the ovaries be entirely removed from the female, œstrum will not occur, but if they be transplanted into any part of the body, even subcutaneously, the condition will reappear. Where only parts of ovaries are transplanted œstrum will follow to a lesser degree.

It is interesting to note here with respect to the male, and especially in the case of cryptorchids, that Shattock and Seligmann (1904) have shown in several experiments that if a testis be broken up and fragments remain in normal position or even become attached to viscera, the animal will retain a certain amount of his male characters. They say "one must regard the external character of maleness as a quantity which varies proportionately with the amount of gland tissue present."

Concomitant, and practically synchronous with œstrum is the process of ovulation, a process by which the ovum (one or more) becomes mature, and is then extruded from the ovary ready for fertilization by the spermatozoa. The cavity from which the ovum escaped is filled up by a tissue known as the corpus luteum—a tissue which, if conception occurs, persists during the greater part of the period of gestation, and has a very important bearing on the fixation of the fertilized ovum to the uterus. At the same time as these phenomena are going on a complicated process of preparation is proceeding in the uterine wall. There is a congestion, and an increase of capillaries in the submucous coat. The walls of the vessels give way and blood is extravasated into the submucosa. The uterine mucous membrane then ruptures here and there, and blood in some animals, in others blood mixed largely with mucus finds its way into the uterine cavity, then to the vagina, and thence outside. This is followed by a process of recuperation—a repair of the uterine wall—leaving it fresh for the fixation of the fertilized ovum. Geddes and Thompson, in their evolution of sex, say the process is viewed as a kind of surgical freshening of the uterus for the reception of the ovum, whereby the latter during the healing process can be attached safely to the uterine wall.

With these preliminary remarks on the phenomena of œstrum we will now turn to the ætiology of sterility. Eugen Bass, *Journal of Comparative Pathology and Therapeutics, 1894*, has divided this under three heads:

Inability to Form Ova.

The power to produce ova presupposes a healthy ovary. If these are absent—which is very rare—or if they be markedly pathological, ova will not be produced. Absence or deformity of the ovaries is mostly seen in a heifer which has been twin with a bull—a "Free marten," an animal often masculine in appearance. I have, however, seen a heifer which was twin with a bull breed.

Under this heading we also class all inflammatory conditions of the ovaries and their results, such as atrophy, or septic or purulent formation, which latter may be secondary to similar conditions previously present in the uterus. The ova and ovarian tissue may thereby be destroyed. Tuberculosis of the ovaries in cows is not uncommon, and to this may be added cysts, fibromata, carcinomata, melanomata, and sarcomata.

The diagnosis of these conditions is by no means easy We may have absence of œstrum, or exaggerated œstrum or nymphomania. Tuberculosis of the ovaries, in the early stages at any rate, is a frequent cause of nymphomania. The cow becomes what we call a "buller," she loses her shapes, becomes masculine in appearance, often loses condition, and often is nearly constantly in œstrum.

Pathological conditions of the ovaries, however, are not always the cause of nymphomania. Certain cases are undoubtedly due to nervous irritation, especially in mares, and this leads to a degeneration and atrophy of the ovaries as a result. Its cause is difficult to determine—it may be one of the disharmonies which Metchnikoff, in his "Nature of Man," has pointed out to be so common in the generative systems of animals.

Climatic conditions, heat and cold, a dry, warm season, influence reproduction to a great extent, and thus may be looked on as acting through the nervous system.

Food plays a very important part in reproduction. Animals which are underfed or overfed often do not breed. Good feeding, however, is necessary, and is well demonstrated by the practice of "flushing" sheep, where they are put on to better rations a month before the "tupping" season. This has been distinctly proved by Marshall to produce a greater percentage of lambs. The quality of food also is important; many mares will not "settle" until put to grass for some time. Animals in poor condition should be put on better rations and tonics. Animals over-fat must be reduced by bleeding, physic, change of food and change of work. Obesity is, however, often a sign of pathological conditions of the ovaries, as absence of ovarian secretion leads to a deposition of adipose tissue, such as is seen after ovariotomy. Animals systematically prevented from breeding have been shown by Heape to become ultimately sterile. Animals mated at too early an age sometimes become sterile in after life.

Treatment.—In cases where there are pathological conditions of the ovaries treatment is of little avail. It has been recommended to crush cysts through the walls of the rectum, or withdraw their contents with a trocar, but such would give little result. On the other hand, sterility through bad feeding and keeping can usually be remedied. In this connection I am of the belief that there are many cases in which inability to produce ova, and often, too, absence of œstrum, is due to inertia of the ovaries through no pathological condition. In such cases the treatment depends on the use of certain aphrodisiacs, and upon these I should like to say a few words. These include Strychnine, Phosphorus, Arsenic, Damiana, and Chloride of Aphrodine. Cantharides has often been used, but its action is almost entirely as an irritant to mucous membrances, especially that of the uterus; whereas what is required is to increase ovarian secretion.

Aphrodine, according to Finlay Dun, stimulates the central nervous system, and causes marked congestion of the genital organs. It has the disadvantage of being costly, but I have used it with good results. I gave a heifer one grain per day hypodermically. She had never previously been seen "in season," but she took the bull after the 8th injection. She did not settle, however, and twice after came in season at regular intervals and settled the third time. Other cases in which I employed this drug were somewhat similar.

Damiana is also a valuable agent in absence of œstrum. Its effect is somewhat like aphrodine. A very useful combination is: Extracts of Damiana and Nucis vomica with Phosphate of zinc. Another is Phosphorous, Aloes, Iron and strychnine. Another prescription I have found useful is:

℞	Ext. Coca	grs. xxx.
	Cinchona Sulph.	ʒi.
	Phosphorous	gr. ¼.
	Ext. Nucis Vom.	grs. x.
	Ferri Brom.	grs. xl.

In these cases ovarian extracts would, I believe, be of very great value.

Inability to perform Coitus.—This may be due to abnormalities or adhesions of the vulva or vagina, to excessive development of the clitoris or hymen. I have known of one case of excessive development of the hymen which prevented coitus in a mare. After it was severed the mare began to breed. Imperforate hymen is common in cattle. In old, leans cows we sometimes see the vagina in almost a vertical position, preventing contact with the bull. Tumours within the vagina are not uncommon. The treatment in this condition depends upon the cause, adhesions may be cut or broken down, and tumours removed.

Inability to Conceive.—Before conception can take place the spermatozoa must meet the ovum in the fallopian tube, and perhaps sometimes in the ovary. Any condition therefore which prevents the ascent of the living spermatozoa will prevent conception.

Mechanical Obstacles.—The first of these is occlusion of the os. It is a very common cause of sterility in the lower animals. It may be a congenital condition or it may be acquired, due to injury from a previous parturition. It is not uncommonly the seat of malignant growths or ulceration. Strictures, displacements and tumours of the fallopian tubes, and displacement of the uterus enter into the category.

Treatment of stricture of the os. Dewar maintains that if a quill can pass through the lumen of the cervix it is sufficient to allow of the passage of the semen. As a rule, we find on examination after coitus in the mare that the lumen will admit of the passage of one or two fingers. If the whole hand can almost or wholly pass the condition is often one of nymphomania. If not, the animal is nervous and relaxation of the os is present, the semen is often expelled in the same way as in spasm of the vagina (vaginismus). In complete closure of the os dilatation may be accomplished by the fore finger, and afterwards may be dilated to the extent of admitting all the fingers of one hand. When, however, passage of the finger is impossible a blunt smooth sound or bougie of small diameter should be pushed through the cervix. If the closure be due to adhesions it may be necessary first to use a bistoury. When one has succeeded in passing a small bougie a larger and larger may be passed until the os is well dilated. If the occlusion is due to muscular contraction the os may again contract as soon as the sound is removed, or if due to adhesions these may again unite ; it is well, therefore, that a tent be introduced into the orifice for a few days. If this is done the dilated os will remain in this position for a time, and ruptured adhesions will have healed up. Craig describes a tent made by soaking a sponge, to which a short string is tied, in a solution of Gum Arabic ; it is then closely wound round with a thread, so as to form an elongated pointed mass four to five inches long ; when dry the thread is removed, and the sponge smeared with glycerine is inserted into the os. Here it softens and expands, and in so doing widens the canal. Tents made of dried seaweed are also on the market, and answer very well.

It must not be forgotten that in conditions of complete closure of the os, a certain amount of fluid may be retained within the uterus, due to the secretions from the uterus during the periods of œstrum having accumulated. These secretions may decompose and become septic or purulent, but the most common condition perhaps is acidity. Acidity may be tested with litmus paper, and if present it will at once destroy spermatozoa. In such cases the uterus should first be rinsed with a weak solution of Iodine, followed by repeated flushings with a 2% to 5% solution of bicarbonate of soda. I have often noticed that an animal would not conceive until the second or third period of heat after the os has been dilated. I take it that only after that time the secretions and mucous membranes of the uterus have taken on a healthy condition.

In cases where the cervix uteri is contracted, long, narrow, or small, and where the vagina is small or ruptured, artificial insemination has been practised with fairly good results. I believe it was first used in bitches by Spallanzani in 1784, and later by Rossi, but it seems to have fallen into disuse in this country until 1897 when it was carried out in bitches and mares by Walter Heape. It is also practised in America and India. The operation consists of introducing semen through the os uteri by means of a syringe. After coitus the semen will be found in the lowest part of the vagina, it is drawn into the syringe, which should be sterile and at blood heat, the nozzle is then passed through the os and the semen discharged into the uterus. From my own experience I have had a certain amount of success with this method, but I much prefer to dilate the os and follow with a uterine tent, as by this method the uterus can be more easily flushed out, and I consider this a very important point if success is to result.

Pathological conditions of the uterine mucous membrane. There are many conditions of the uterine mucosa which cause sterility. Catarrh of the mucous membrane, metritis, acute and chronic, hydro or pyometra destroy the semen when it enters the uterus. Inflammatory conditions of the membranes also prevent fixation of the ovum after it may have been fertilized. Tuberculosis of the uterus has a similar effect. Manual examination of the genital tract, the presence of mucopurulent or evil-smelling discharge will help one to arrive at a diagnosis. As treatment, washing out of the uterus with antiseptics and astringents is indicated. For acidity of the uterine discharges Boillard recommends injection of a little warm water into the vagina before copulation, while others recommend the injection of a warm soap solution.

Retention of the fœtal membranes after parturition or abortion and consequent endometritis is a fruitful cause of sterility. These I consider should be removed after 24 hours, and the uterus thoroughiy irrigated with disinfectant and astringent solutions.

Nervous obstacles. Lastly we may mention nervous obstacles to conception. Colin has pointed out that the semen is often passed out as a result of severe straining after copulation. This is often seen in young animals in good condition. It may depend on a neurosis : it is sometimes known as vaginismus. In order to prevent this, Colin recommends that the animal be excercised briskly after coitus, and that cold water should be poured over the hind quarters.

Discussion.

The President congratulated Mr. Brown on the excellence of his paper on such an interesting and important subject to all country practitioners.

Mr. Cumming thanked the esssayist for his excellent paper, and said that he had not made a hobby of the subject, though he had practised artificial insemination with varied results, and dilatation of the os with partial success.

Mr. Marshall thought that the greatest difficulty was in diagnosing the exact cause of sterility in view of adopting any particular line of treatment. He believed that high feeding for show purposes was a great cause of sterility. In mares his experience had been that hard workers conceived best. In artificial insemination of cows he had often experienced a great difficulty in getting the nozzle of the syringe into the os, owing to the spiral form which that organ often assumes. In some cases indeed he had completely failed.

Mr. Anderson had experience of contagious vaginitis,

and asked Mr. Brown if he thought that disease would act as a cause of sterility.

Mr. HEPBURN said that in his experience occlusion of the os and endometritis were the chief causes of sterility. He quite agreed with Mr. Marshall about the great difficulty in dilating the os in cows. He had had a special instrument made and yet had little success. He was of opinion that chronic endometritis often followed contagious abortion, and acted as one of the causes of sterility. Regarding the injections of Iodine, he would like to ask Mr. Brown the strength of the solution and his reason for using it. He believed that feeding had a great deal to do with sterility. He had used the artificial inseminator with a fair amount of success in mares, but in cows with none at all.

Mr. SIEVWRIGHT thanked Mr. Brown for his excellent paper, and said he had had various successes with both dilatation of os and the inseminator.

Mr. MCPHERSON (President) said he could add very little to the discussion which had not been already said. Finding out the exact cause was the great difficulty, as on a correct diagnosis depended the particular line of treatment to be adopted in any particular case. In cases of a discharge from uterus he had good results after injecting twice daily a solution of Condy's fluid.

Mr. BROWN thanked the members for the favourable reception given to his first paper. Regarding the difficulty in dilating the os in the cow, he called to mind two cases, in one of which the os was entirely obliterated, while in the other a false membrane was growing across it. In one case he used a special lancet with which he made an incision, he then introduced a bougie until he could dilate it ¼-inch. He then pushed a long sound right through, after which he put in a tent. Three days later the cow died from septic peritonitis from rupture of one of the horns of the uterus. This cow had tubercle of the ovaries. Regarding the spiral form of the os in the cow, one had to exercise great patience and work away until an entrance could be effected. He mentioned a new instrument for this purpose which was made of wood in the form of a corkscrew, but as yet he had no experience of it. In reply to Mr. Hepburn, the Iodine solution he used was 1% Lugol's solution which he used quite a fortnight before copulation as a disinfectant; if used more recently than that it would most certainly kill the spermatozoa. He always followed it up with a solution of Bicarbonate of soda. He concluded by saying that his belief was that in healthy animals the principal causes of sterility were occlusion of the os, inertia of the uterus, and diseases of the uterine mucous membrane.

The PRESIDENT then called for a hearty vote of thanks to Mr. Brown which was cordially responded to.

It was resolved that the business for next meeting would consist of a general discussion on interesting and out of the usual cases to be introduced by the members.

Place of Meeting. Mr. Cumming moved, and Mr. Hepburn seconded, that the place of meeting should be removed to some room in say, a hotel or restaurant where the members could sit round a table and discuss the business of the Society in a freer and more friendly way than from the benches of a class room.

Mr. ANDERSON moved the amendment that we remain in the present place. This was seconded by Mr. Morrison.

On being put to the vote the motion was carried by a majority.

A vote of thanks to the President brought the meeting to a close.

GEORGE HOWIE, Hon. Sec.

NORTH OF IRELAND VETERINARY MEDICAL ASSOCIATION.

The annual general meeting was held in Deveney Chambers, North Street, Belfast, on Thursday, 18th January. The President (Mr. F. W. Emery, F.R.C.V.S.), occupied the chair. The following members were present: Messrs. Howard McConnell, J. Ewing Johnston, W. C. M. Smith, F. R. McRoberts, John McLean, J. McAleer, Henry Gibson, J. A. Thompson, and J. A. Jordan. Apologies were received from Messrs. J. J. Ross, Matt Hedley, Wm. Dawson, A. Snodgrass, and Capt. Nicholas.

The minutes of the last meeting were read, and on the motion of Mr. Howard McConnell, seconded by Mr. J. A. Thompson, passed and signed.

INTERNATIONAL VETERINARY CONGRESS.

The PRESIDENT pointed out that as the expenses of this Congress would entirely devolve on the members of the profession, we should consider what we as an Association were going to do. He would suggest that an amount be decided upon to-night, and that it be spread over three years. Individual members, he said, could forward subscriptions to the Treasurer if they wished. The name of anyone subscribing £10 would appear on the Committee.

After discussion it was proposed by Mr. J. Ewing Johnston, seconded by Mr. W. C. M. Smith, and passed unanimously, that £5 5s. be ear-marked annually for three years and forwarded to the Treasurer of the Congress.

CORRESPONDENCE.

Mr. JORDAN read communications he had received. From Mr. J. B. Dunlop, Dublin, in which the writer expressed a desire to read a paper entitled "Is Tuberculosis Hereditary," before this Association at an early date. It was unanimously decided to inform Mr. Dunlop that this Association welcome the opportunity of hearing him on such an interesting subject, also that the Secretary be requested to convene a special meeting for that purpose to be held on Friday, 16th February.

A letter from Mr. Faithfull-Davies in which he mentioned that a Congress would be held next October in Paris in connection with the Société de Pathologie Comparée, and asking that it might be brought under the notice of this Association. The letter was marked Read.

Letters resigning membership from Messrs. Snodgrass and Crighton. The Secretary was requested to write Mr. Snodgrass asking him to favourably reconsider his decision, and Mr. J. A. Thompson arranged to personally interview Mr. Crighton with a similar object.

The TREASURER submitted his annual balance sheet, which showed that the funds in hand were in excess of the amount of last year. He expressed regret at having to report so many outstanding subscriptions.

Mr. MCCONNELL, In moving a hearty vote of thanks to the Treasurer, said that he was glad to hear that the Association was in such a satisfactory financial position, and he was sure they all felt safe so long as Mr. Thompson had control of the Association's funds. Mr. Gibson seconded, it was passed by acclamation.

ELECTION OF OFFICERS.

Mr. JORDAN said he desired to propose as President a gentleman who had taken a great interest in all the affairs of the Association since its inception, and had been a regular attendant at all its meetings. He believed Mr. Howard McConnell would make a worthy successor to the excellent President who is vacating the chair (Mr. Emery), and he was confident that the Association would continue to prosper under his guidance.

Mr. GIBSON seconded, and it was passed by acclamation.

Mr. EMERY, on vacating the chair, thanked the officers and members for the loyal support they had given him during his two years of office; he sincerely hoped that the same support would be extended to his successor, Mr. McConnell.

Mr. MCCONNELL, on taking the chair, thanked the members for placing him in such an honoured position. He hoped, with the assistance of the members, to make the present year a record one; to try and influence all the members of the profession in the North to join this Association, thereby cement the Veterinary profession in the North of Ireland into one body with one object, namely, to elevate the social standing of our profession generally, and to establish, promote, and maintain a good and friendly understanding amongst the members. He trusted the members would attend the meetings of the Association, and take an interest in all the questions that come up for discussion from time to time.

Vice-President. Messrs. W. C. M. SMITH, Newry, and JOHN KERNOHAN, Ballymena, were unanimously elected.

Treasurer. Mr. J. A. THOMPSON, J.P., Lurgan, was unanimously re-elected. In thanking the members for their continued confidence in him as their treasurer, he trusted that the Association would continue to prosper in the future as it had undoubtedly done in the past.

Secretary. Mr. J A. JORDON was unanimously re-elected. He also thanked the members for their continued confidence and said he would very much have preferred that some of the other members had been selected. He had now held the office for four years, and he could assure them that he would have been only too glad to hand over the seals of office. However, he had decided to accede to their request and continue to discharge the duties to the best of his ability for one more year.

Council. The following members were unanimously appointed: Messrs. J. J. Ross, F. W. Emery, J. E. Johnston, John McLean, F. R. McRoberts, W. Dawson, and Joseph McAleer.

THE RELATION OF VETERINARY SCIENCE TO PUBLIC HEALTH, by F. W. EMERY, F.R.C.V.S.—DISCUSSION.

Mr. THOMPSON, in congratulating Mr. Emery on his excellent paper, admitted he had not read it as carefully as he should have. With regard to the question as to the right of one authority sending their officials into the district of another authority to inspect the dairies, he was quite in agreement with Mr. Emery. He understood the Belfast Corporation sought this privilege, and he considered that if such were granted it would lead to a great deal of confusion, and the results would be deplorable. In his district a great improvement had been made in the sanitary condition of the byres, and greater attention was paid to the condition of the cows. The farmers, realizing the advantage of keeping their byres and cows in a clean and healthy condition, were anxious and willing to carry out any suggestions he made to them. A great number had made improvements in the floors of their byres by putting down concrete. No doubt there were still a number of very bad cases where the milking utensils were not properly cleansed, the cows not groomed, and where the personal cleanliness of the milkers was not as he would wish them.

Referring to Veterinary Lecturers, he said that if they would confine themselves to instructing the farmers in veterinary hygiene instead of describing symptoms and treatment of diseases they would be an advantage not alone to the farmers but to the veterinary profession, instead of being, in his opinion, a curse to both. At present many quacks were practising throughout the country, castrating and operating for hernia. He knew himself of a young farmer who, after attending one of these lectures, attempted to treat a neighbour's horse for hernia, with the result that the neighbour lost his horse. Some time ago he brought this matter of Veterinary Lectures before the Veterinary Medical Association of Ireland, when it was decided to bring the matter under the notice of the Department of Agriculture. The Department replied that it was not their intention to interfere in any way with veterinary practitioners or do them harm, and that the matter would have their attention. Still the same thing goes on.

Mr. GIBSON congratulated Mr. Emery on his paper. He stated that he had attended a few of these lectures while stationed in County Wexford. He heard the lecturer describe how difficult parturition cases should be carried out, he also heard him describe in detail the Cæsarean operation.

Mr. JOHNSTON suggested that a resolution should be framed with reference to these veterinary lecturers, and copies forwarded to the Royal College, to the Department of Agriculture and Technical Instruction for Ireland, and to the different County Councils.

Mr. EMERY considered Mr. Johnston's suggestion should be acted upon, and it was decided to leave the matter in the hands of the Council.

The PRESIDENT thanked Mr. Emery for his most interesting and comprehensive paper. He was glad that mention had been made of the manner in which the transit of pork was carried out in Ireland, especially in the North. No thought was evidently given to sanitation, carcases were thrown into railway waggons along with other merchandise, and cartloads of dead pigs were conveyed from place to place without any covering whatever. This, to his mind, was most undesirable. He was of the opinion that if the Belfast Corporation Inspectors were granted the power to enter and inspect dairies in country districts the results would be deplorable. If the Belfast authorities had reasons for being suspicious of the milk supplied from any particular district they should communicate with the local veterinary inspector of that district, and ascertain some facts from him before taking any action. In his district he had most trouble with the small dairymen, the more extensive ones took an interest in their places, and endeavoured to bring them up to the required standard. With regard to veterinary lectures he might say that he had them in some part of his district every day. In his opinion they were of no assistance to the farmers. If they were conducted on proper lines and confined to veterinary hygiene and the care of cows—instead of describing symptoms and treatment of diseases, practical demonstrations as to how to examine for side bones, and instructions how to conduct the tuberculin test, he had no doubt that they would be of considerable service to the intelligent farmer. He said that if the Royal College wished to secure the assistance of the veterinary profession in Ireland they should at least try and do something to put a stop to the manner in which these lectures were conducted, and exercise some control over the members of the profession who acted as lecturers. With regard to the question of meat inspection, he had little to say further than he was sorry no such thing took place in his district.

Mr. EMERY in thanking those who had taken part in the discussion, said he very much appreciated the kind things they had all said with reference to his paper.

Mr. JORDAN said that before the business of the meeting concluded he would like to perform a very pleasing duty, namely, to move a most sincere and hearty vote of thanks to the immediate Past-President (Mr. Emery) for the way in which he had conducted the business of this Association during his two years of office. He had maintained the dignity of the chair and the prestige of the Association.

Mr. THOMPSON said it afforded him great pleasure

to second the motion, and he agreed with every word Mr. Jordan had said. [Passed by acclamation].

Vote of thanks having been passed to the President the meeting terminated.

A special meeting was held on Friday evening, 16th February, in the Association's Rooms, 7 North Street, Belfast. The chair was occupied by the President, Mr. Howard McConnell. The following members were present:—Messrs. Robt. Kernohan, J.P., J. A. Thompson, J.P., Frank R. McRoberts, Jno. McLean, James Gregg, James Devlin, Henry Gibson, W. C. M. Smith, J. J. Ross, J. Ewing Johnston, and J. A. Jordan, Hon. Sec.

Apologies for non-attendance were received from Messrs. F. W. Emery, and T. D. Taylor.

The SECRETARY having read the circular convening the meeting, the President in a few well chosen words extended a hearty welcome to Mr. J. B. Dunlop, M.R.C.V.S., Dublin.

IS TUBERCULOSIS HEREDITARY.

By J. B. DUNLOP, M.R.C.V.S.

Mr. DUNLOP, who was received with applause, said that it afforded him a great amount of pleasure indeed to be up amongst his professional brethren in the North once more, and to see so many familiar faces. He thanked the President and members for their courtesy in arranging the present meeting, especially seeing that their annual general meeting had been held so recently. He said the paper which he was about to read contained theories which might be considered by some as not altogether orthodox, however, they were the results of a great many years close observation, and he was going to put them forward in order that they might be discussed.

There is no subject engaging the attention of the profession so much as the eradication of bovine tuberculosis. It is impossible to eradicate the disease in man, even under the most favourable conditions, while he continues to drink unsterilised milk from infected animals. According to the report of the Royal Commission, the milk of cows affected with tuberculosis, even when no tubercular lesion of the udder is apparent, often contains the specific bacillus. Pure milk free from disease is an important part of the food of man and is a necessary food for the infant. Boiling the milk for a few minutes has the effect of destroying any bacilli that it may contain, but this is seldom done, and when done it has the effect of destroying the enzymes which are a necessary aid to digestion in the infant. It is said that milk can be sterilised by means of pasteurisation without destroying the enzymes, but many believe that the bacilli cannot be destroyed in any way without destroying or impairing the enzymes or rendering the milk undrinkable. It is said that twenty-five per cent. of the cases of tuberculosis occurring in the human family are caused by the bovine bacilli, and that the victims are mainly children. Bovine bacilli are much more virulent than the human variety. Twenty-five to thirty per cent. of dairy cows are believed to be affected with tuberculosis, and it has been stated that the eradication of tuberculosis would diminish the annual death rate of British cattle by 20 to 30 per cent.

Before proceeding to indicate the lines on which we, as a profession, must proceed in order to rid our country of tuberculosis, we have to consider whether the disease is hereditary or not. No one can deny that the disease is contagious, and I need not tell you gentlemen that it is also highly infectious. The simplest method of procedure would be the wholesale slaughter of the affected animals, but I need not say that would be too costly.

The object of this paper is to show how tuberculosis in cattle can be eradicated at small cost to the State, with immediate peofit to the farmer, dealer, breeder, and dairyman, and without inconvenience to the community. In order to stamp out the disease with certainty and a minimum cost to the country it must, in my opinion, be dealt with as one which is hereditary as well as highly infectious.

Authorities are unanimous in saying that tuberculosis in man and animals is infectious, but they are divided as to whether the disease is hereditary or not. Looking at the subject from the breeder's point of view, the disease in cattle is, I think, hereditary, inasmuch as the disease runs in families. It is well known that some breeds of cattle are more predisposed to the disease than others, and there is abundant evidence to shew that the degree of susceptibility to the disease varies in different individuals, the only difference being in the chemico-physiological inborn condition of the several individuals, age and other conditions being similar. It is well known that the Ayrshire, the Shorthorn, and the Jersey breeds of cattle are more liable to contract tuberculosis than the Hereford, the Galloway or the West Highland breeds. At one time, when the breeds were more distinct the Alderney was more susceptible than the Jersey.

Tuberculosis, like any other infectious disease, is caused by the entrance into the body of the specific microbe known as the tubercle bacillus. Tubercle bacilli do not multiply naturally outside the body, thesefore no person however delicate or susceptible to the disease can contract tuberculosis unless he or she receives the microbe directly or indirectly from some other affected person or animal. Tubercle bacilli have been compared to seed. Some seed falls on hard and stony ground and will not grow, some falls among thorns and is choked. Probably with the great majority of mankind the bacilli are taken into the body but they are unable to penetrate the mucous membrane, which is the first line of defence—the ground is too hard for the seed to take root. Every person receives the specific microbe into his or her body at one time or another, but all do not contract tuberculosis. Happily we are not all good culture ground. Susceptibility is inherited, not the seed. The soil may be greatly modified by environment

Bacteriologists tell us that the tubercle bacillus is never present in the body of a child at birth, and veterinary bacteriologists tell us that a small percentage of calves are born with the bacilli in their bodies, but the number of such calves is insignificant and they need not be taken into consideration, therefore tuberculosis in animals as well as in man may be taken as not being congenital.

Some veterinary bacteriologists contend that tuberculosis in man is not hereditary or that it does not run in families, and they naturally infer that the disease in cattle also is not hereditary. Being opposed to these views it will be necessary to prove that the disease in man as well as in animals is hereditary.

It is an acknowledged fact that all living things are determined by heredity and environment, therefore there can only be these two factors in the causation of any disease or any form of life. Predisposition to tuberculosis may be part inherited and part acquired by environment.

A large proportion of the human family possess, or rather inherit, the power to resist tuberculosis in a very high degree. Many of these people live for years in the slums in poverty, dirt, and misery, in badly ventilated dwellings, inhaling and ingesting large quantities of the infective material, and die eventually of any disease except tuberculosis. On the other hand some people are extremely susceptible to the disease even under fairly favourable health conditions; between these extremes are to be found in different individuals all degrees of susceptibility or insusceptibility to tuberculosis. With many individuals natural insusceptibility is not well

marked—with them it is only a potentiality. In such cases the environment is a powerful factor tending to develop or to suppress the inherited power to resist the disease. Unhealthy surroundings are predisposing causes because they increase the inborn predisposition to the disease or they decrease the inherited powers to resist the disease. The wise physician advises those under his charge to take speeial care to avoid and guard against the affection.

To prove that tuberculosis is not hereditary, cases have been cited in which a healthy "disease-resisting" child has been born of a diseased parent, but such cases prove nothing; some diseases pass over one generation. According to Galton's law of ancestral inheritance the two parents contribute one half, the four grand parents one quarter, the eight great grand parents one-eighth (each great grand parent one sixty-fourth) of the total heritage of the average offspring. The offspring are rarely intermediate between the two parents. The offspring may resemble one of the parents. Some of the offspring may resemble one of the parents and some the other. Some of the offspring may inherit some of the peculiarities of one or both parents unimpaired or even enhanced. When both parents possess a certain character or peculiarity we can be almost certain that it will be transmitted. Some individuals possess a high degree of potency to transmit to their progeny their characters, and this is more marked when the other parent is weak in this respect. The inborn disposition to contract diseases, infectious and non-infectious, appears to follow Galton's law of ancestral inheritance.

It is well known that tuberculosis often runs in families, but some people say that the exceptional frequency of the disease among children of affected parents is solely due to the fact that such children, living as they do in close association with their parents, are exceptionally exposed to the risks of infection.

That the exceptional frequency of tuberculosis in the children of affected persons is, in a large measure, due to exceptional susceptibility, has been proved over and over again. The fact is quite apparent where some members of a family contract the disease and other members escape, all having been reared and living under the same roof.

A connection of mine, a healthy man, having a healthy family history, married into a consumptive family. Half the children died of tuberculosis. The eldest daughter nursed the sick members of the family and lived to a good old age. All were born and reared in the same house. The father married again into a healthy family. The second family, a son and daughter, are alive and strong, and they, too, were reared in the same house. Such cases are not uncommon. I have known of instances where two sisters slept together and one died of consumption, and the other lived to a good age and remained healthy. Many of us must have known or heard of cases where one of a married couple died of consumption. In the majority of these cases the survivor never exhibited any symptoms of tuberculosis; in a minority of cases the survivor contracted the same disease. Obviously the difference in the results depended on the difference in the degree of susceptibility of the individuals. In all such cases the survivors must have been exposed to large quantities of the infection.

Long before Koch discovered the tubercle bacillus, nay, long before the germ theory of disease was accepted, many believed that tuberculosis was infectious, while others held that the disease ran in families. We know now beyond a doubt that tuberculosis is infectious, but only to those who are susceptible.

Though tuberculosis in man is not now congenital, probably it was so in prehistoric times. Children born with the actual disease in their bodies would, as a rule, be very delicate. The proportion who would live to marry would be very small, therefore in each succeeding generation the number having the disease at birth would be less and less until the disease in the congenital form would cease.

Tuberculosis in cattle is rather different. In the great majority of cases of bovine tuberculosis the disease is chronic and non-fatal, spreading slowly and not sensibly affecting the animal's general health. The tissues of the cow have a wonderful power of surrounding and encasing minute collections of the bacilli with fibrous tissue—thus rendering them harmless. Knowing that to be so, we would naturally infer that many of the calves born with the bacilli in their bodies would survive till they became parents, and thus the disease in the congenital form would to some extent continue to be transmitted. We actually find at the present time that the disease in a small number of cases is congenital.

The progress of tuberculosis in many cases must be very slow and long continued, for we often find in aged cows large masses of tuberculous matter enclosed irregularly in capsules of fibrous tissue. This is why the disease is known in some parts of Ireland as "grapes." In a very small number of cases the disease is rapidly progressive and fatal. The disease in this form is, no doubt, gradually being eliminated by natural causes.

Many years ago a remarkable but by no means uncommon case of a bull disseminatlng tuberculosis came under my notice. The bull, which was a fine pedigree Shorthorn Prize winner, belonged to the Rev. ——, a model farmer, not far from Newtownards. In the course of my duty as inspector I made a post mortem of two cows which had died in a dairy, of tuberculosis of the lungs, and I was informed that four other cows similarly affected had died a short time before in the same dairy. All these cows were bred from the same bull. The opinion of the farmers in the district was unanimous regarding this bull's potency to transmit tuberculosis.

At some of the meetings of the National Health Congress which took place recently in Dublin, interesting lectures were delivered on Eugenics. The views expressed by the lecturers appeared to be sound and correct. I am afraid, as far as human beings are concerned, these views could not be translated into practice. In the present state of society we cannot prevent the diseased, the degraded, or the imbecile from marrying.

I see no reason why Eugenics should not be applied to cattle. When a breeder seeks to develop a number of points or characters in a breed his task is a very difficult one. When his object is to develop one character only his task is a very simple one. It would appear to be a very simple matter to produce a strain of cattle which would, under ordinary circumstances, be capable of resisting tuberculosis. About seventy per cent. usually resist the disease. Select the seventy per cent. and breed from them. An exceedingly small per centage of the offspring may be expected to become affected. Select and breed again, and by repeating this process of weeding out, "stability" and "potency" will be produced, and new disease-resisting breeds quickly established.

Should it be considered necessary or advisable to produce a breed of cattle able to resist the disease under exceptionally unfavourable conditions (and this is unnecessary, because the science of hygiene and sanitation are progressive), let the cattle selected be kept in closer association with the diseased, and for a greater length of time, until the healthy are reduced say to fifty or twenty-five per cent. of the whole, and breed from these only.

The rules which guide breeders of stock have been gained by experience, and it is well known that any desired character or peculiarity in an animal can, by skilful breeding, be wonderfully intensified or developed.

Some say that the highest degree of insusceptibility possessed by any bovine animal is inadequate to enable it to withstand ordinary risks of infection. As a matter

of fact a large proportion of all breeds of cattle under ordinary conditions do not contract tuberculosis, no experiments are required to prove this. Veterinary surgeons can now almost infallibly point out the affected and the unaffected, and they seldom find more than one-third of a herd affected.

Excellent work is being done by private enterprise, and by officers of some local authorities in eliminating tuberculosis from dairy and other stock. Healthy cows are selected by the veterinary surgeon, generally from cattle reared and kept under most favourable conditions. The practice of selecting cattle from an extra healthy, well-kept stock will only to a small extent increase the disease-resisting power of the cattle selected, or of their progeny. The test is not severe enough to be of much service, and improvement cannot be progressive.

It has often been suggested that calves should be isolated from their dams at birth and fed on pure or on sterilised milk so that sound herds may be secured, and by careful continued isolation and constant watching that pure milk may in this way be obtained. The early isolation of calves from a mixed herd effects no improvement whatever in their ability to withstand disease, and there is always a danger of infection being accidentally introduced.

Disease-resisting stock of several breeds should be quickly established—not necessarily breeds capable of withstanding exposure to any amount of infected material for an unlimited time in close badly ventilated byres. No fire-proof building ever constructed is proof against a big conflagration. It is satisfactory to feel assured that no bacilli can generate within a healthy herd, that no accidental intrusion of the bacilli can take any appreciable effect on a well-tested and carefully selected stock, and the veterinary surgeon can easily remove at convenience any tainted animal.

Many are anxiously and hopefully looking forward to the time when tuberculosis will be eradicated from the human family. Hygienic conditions will be so much improved that our natural powers to withstand disease will be greatly increased. Centres of infection will be comparatively few, and where infection does remain it will be so diluted by scientific ærial sanitation that it will cease practically to be a factor in the causation of disease. It is all the more urgent, therefore, that something practicable should be done to eradicate the disease in cattle, in order to put a stop to the needless slaughter of the innocents, knowing as we do that the bovine bacilli are more virulent than the human, that it is the children especially who fall victims to the more virulent microbe, and that sanitary and hygienic measures cannot overcome the ingestion of large doses of the virulent infective material contained in impure milk.

The present generation can scarcely realise the good work which has been done in the past by the veterinary profession. Terrible animal scourges have already been stamped out. The field of preventive medicine is still large, and much remains to be done.

Of the many diseases that still remain with us and demand our attention, tuberculosis is the most urgent, because it is widespread and is the one common disease transmissible to mankind. Let us hope that the good work which is being done by veterinary officers of health, and by private enterprise under the guidance of the veterinary surgeon, will be continued and greatly extended. If we are to succeed effectively and expeditiously in eliminating the disease from our herds we must attack it vigorously on all sides, we must deal with it as a disease which is highly infectious and hereditary. Where there is sufficient housing accommodation, affected cattle should be separated from the healthy, and the former prepared for the butcher. In all cases small partitions should be erected at the heads of the cattle to separate one cow from another. It is lamentable to think of cows being allowed to cough over each other's food; it is a breach of the elementary and fundamental laws of hygiene and sanitation. There could be no more speedy and effective way of disseminating disease: the infective material passes in this way directly into the lungs of the healthy cows, or is swallowed with their food. A small inexpensive drinking vessel should be provided exclusively for each cow, and each vessel numbered. Food refused by one cow should not be given to another. The trough should be cleaned out, and the attendant should wash his hands well before touching any other feeding stuff, or handling milk.

Dry excreta should not be rubbed off cows, as that causes dust, contaminates everything, and is liable to spread disease. It should rather be moistened well with some disinfecting fluid and scraped off. Where there is danger of dust rising from infective material the place should be sprinkled with a solution of commercial calcium chloride.

Dairyman and maid should wear overalls, and should be supplied with pocket handkerchiefs and instructed to use them when coughing as a result of cold or influenza, etc. The overalls and handkerchiefs should be dipped in a solution of say, five per cent. calcium chloride, and half per cent. zinc chloride, or a weak solution of glycerine, and taken out, wrung, and dried. The two chlorides are antiseptic and deliquescent. Nearly all the diseases we suffer from, and the contamination of milk are largely owing to the dust of infective material which had become dry. We cannot touch a piece of dry cloth or remove ordinary handkerchiefs from our pockets without creating dust.

The house fly is a distributor of disease. It has been observed that typhoid is more prevalent in cavalry and artillery regiments than among the infantry, and the horse manure pit is the great breeding den of the house fly. The house fly should be vigorously attacked in all its breeding places. A slight sprinkling occasionally of petroleum banishes it entirely.

The medical officer, the practitioner, the veterinary inspector, and veterinary practitioner should all wage war against flies and fleas. This (as well as a sanitary measure) would be a work of kindness, a relief to the poor, the careless, and the indifferent, and would, in a measure, mean the removal of a constant source of annoyance to our domesticated animals and a consequent monetary gain to their owners. Needless to say no person should be allowed to milk cows, or handle milk, whose hands are not kept perfectly clean.

No bull should be kept for stock purposes which has not been examined and tested by a qualified veterinary surgeon and certified as being free from tuberculosis. "Like begets like." The Boards of Agriculture and the Agricultural Department should without delay select and breed cattle which have been well exposed to, and which have resisted, the infection. They should also in every way assist breeders who would willingly co-operate, and special attention should be given to the establishing of new (preferably cross) breeds of milch cows, bearing in mind that there is milk *and* milk, and that nothing approaching good milk has yet been discovered for the cure and prevention of disease and the prevention of deformities. By selecting and establishing new disease-resisting breeds of cattle we would be doing effectively that which nature has been doing for us gradually and imperfectly for untold centuries.

The qualified veterinary surgeon being familiar with the cow in health and sickness, knowing all the diseases which are known to be communicable to man, and understanding as he does the improved structural arrangements of the dairy, as well as the correct treatment and management of cattle, is the fit and proper person to inspect and test cattle, and to give any needed instruction to the breeder and dairy keeper.

The busy practitioner cannot be expected to devote much of his time to morphology, but he can refer at any time to our veterinary colleges which are regularly engaged in research work of inestimable value.

Mr. GREGG complimented Mr. Dunlop on his paper and expressed his pleasure at seeing him once more in Belfast. The science of eugenics was one of particular interest to him owing to the fact that he was engaged in an agitation to breed up more milk in our dairy herds. If it were possible to do this it should also be possible to breed up a sound habit of body that would resist tuberculosis.

The paper gave rise to a very full discussion in which Messrs. Johnston, Smith, Gibson, Devlin, McConnell, and Jordan took part, all of whom paid high compliments to Mr. Dunlop for his very able paper.

Mr. DUNLOP having replied to the points raised by the several speakers, a hearty vote of thanks was passed on the motion of Mr. J. Ewing Johnston, seconded by Mr. J. A. Thompson, J.P.

The usual vote of thanks was passed to the Chairman, and the meeting terminated.

J. A. JORDAN, Hon. Sec.

Mechanical Lameness.—Summons Dismissed.

At Folkestoue Borough Bench, before Mr. W. G. Herbert (in the chair), Councillor E. J. Bishop, Major G. E. Leggett, Messrs. J. Stainer, G. I. Swoffer, and G. Boyd, Edward Johncock was summoned for working a horse in an unfit condition.

Inspector Freeman, of the R.S.P.C.A., Dover, prosecuted, and requested that all witnesses should remain outside the court until they gave their evidence.

Mr. Myers appeared for defendant, who pleaded not guilty.

Inspector Freeman said that, in consequence of information received, he visited defendant's stable at Cheriton on the 9th of February at about 5 p.m. He saw defendant there, and said to him, "I have received complaints that you were working a horse attached to an oil van on the 5th, which was very lame, in Shorncliffe Road. Will you show me that horse?" Defendant took witness to a stable and said, "That is the one," pointing to a black gelding. Witness replied, "Why, that is the one I cautioned you about some time ago," whereupon defendant said, "Yes, that is the one. After you spoke to me I gave it a week's rest. It looked all right, so I put it to work again." Witness said, "Didn't you get the opinion of a veterinary surgeon?" He replied, "No, I didn't." As it was getting dark they arranged to examine the horse the next day. The following day witness went to a stable and examined the horse. He should say that it had been used as a carriage horse in its time. It seemed rather a superior horse. On examination he found that it was lame in both its fore feet, and the off knee was considerably swollen. The tendons of this leg were sprained and contracted, and the fetlock was overshot. The horse also had ringbone on the side bones of the leg. He told defendant not to work the horse again, and defendant said he would not but would sell it. He said he would sell it by public auction. Defendant had done so, and witness had not seen it since. He had seen the horse in Cheriton Street on the 22nd January, and had then cautioned defendant.

Mr. Myers: Have you ever heard of mechanical lameness?

Witness: I think that only exists in a Police Court. The Inspector also said he thought the horse was 12 or 13 years old.

Miss Bertha Morris, of Hazlemere, Ashley Avenue, Cheriton, said she saw the horse in question attached to an oil van, being led by defendant, in Shorncliffe Road, on the morning of the 5th January. She noticed that it was very lame in the off fore leg. She stood and watched it for some moments until it had passed some distance on. She saw it again in the afternoon at about 4.30 in the Cheriton Road, being driven at a slow trot. On this occasion also it was very lame. She communicated with Inspector Freeman. Witness had had practical experience with horses. She had been a member of the R.S.P.C.A., but was not now. She had never been a witness in any case before this.

Mr. Johncock himself then gave evidence. He said that on January 22nd he went out with his horse and van, which was a very light one. On his round he saw Inspector Freeman, who came up to him and said, "I am afraid, Mr. Johncock, you have a lame horse there." He replied, "I don't think there is anything much the matter there"; but because of what the Inspector had said, he gave the horse a rest from January 23rd to February the 4th. On February 9th he again saw the Inspector in the evening. The following day he called again as arranged, and examined the horse. He said the horse was not lame then, but if he put it on the road it would be in ten minutes. Witness sold the horse at a public auction, and it fetched £8. He had bought it for £16, but as he had had it for three years and eight months, that was a very small depreciation; it was less than a shilling a week. He had not had much experience with horses.

Mr. Wm. Miller said he knew defendant. He saw him on February 5th, carrying on his usual business. He saw the horse nearly every day, and on the day in question he did not notice any lameness. He stood looking at the horse for about five minutes.

Mr. George Walter Ashby said that he had had five years' experience with horses in South Africa. Somewhere about 9 o'clock on the 5th February he saw the horse at the top of Park Road, walking at an ordinary pace. In his judgment it did not appear lame. Witness had been seeing the animal on his rounds about twice a week for two years.

Mr. Charles Footer, brother-in-law to defendant, said he was present on the 9th February when Inspector Freeman examined the horse. When he (Inspector Freeman) had looked at the horse he said, "It is not lame now, but if you put it on the road it would be in ten minutes. It is no more use to you now." Defendant then said, "I shall sell it."

Mr. Henry B. Eve, M.R.C.V.S., of Claremont, 86, Cheriton Road, deposed that he examined the horse on the 12th February, and then found it in good bodily condition. In 1907 the horse had a very severe accident, cutting its knee nearly to the bone. He then explained that although the knee had healed up remarkably, the tendons and muscles will never set exactly as they were before, and this caused a stiffness, and rendered the horse lame. But it was what was known as mechanical lameness. This was quite different from lameness owing to a sprain. Although a horse might have mechanical lameness, it would not suffer pain from this cause. In his opinion it would not be cruelty to put a horse to light work when it was suffering from mechanical lameness.

After a short deliberation by the Magistrates, the Chairman said they were of opinion that the evidence pointed in the favour of the defendant, and because of this they would dismiss the case, but the Inspector was quite right in taking the proceedings. They would make no order with regard to the costs.—*Folkestone Herald.*

"Mechanical Lameness"—Dismissed

Charles Cousins, 40, carman, of 140, Wickham Lane, Plumstead, was charged on remand at Woolwich Police Court on Thursday, Feb. 29th, before Mr. Symmons, with cruelty to a horse, and Henry Jacobs, of 1, Saunders Road, Plumstead, was summoned for causing the same.

Mr. F. J. Tyler appeared for the defendant.

The evidence of Police-constable McPherson was to the effect that he saw Cousins driving two horses attached to a van laden with coal, in Plumstead High Street One of the animals was lame in both hind legs. When he saw Jacobs, he said he knew the animal was lame, and it had been like that ever since he had been there this last seven years. He maintained it was not cruelty, and if it was why did not the police veterinary say so when he examined the mare some months ago for sore shoulders. Jacobs said he did not see the horse go out, but admitted responsibility.

In reply to Mr. Tyler, the constable said he knew the horse was shod with peculiar shaped shoes, and that it walked on its toes. He thought the horse suffered from pain because it alternately rested its legs.

Mr. Byerley, F.R.C.V.S., said the mare was lame in both hind limbs from sprained and contracted tendons, and spavin, and was quite unfit for work.

Cross-examined: The lameness had existed for more than three months. It was not a case of "mechanical lameness" without pain. The lameness was partly mechanical. He was positive there was nothing the matter with the animal when he examined it in September.

For the defence, Prof. Woodruff, of the Royal Veterinary Veterinary College, stated that he found the mare had two large spavins, one on each hock. The animal was in fair working condition, and had no indications of soreness. He noticed the heels of the hind feet did not come in contact with the ground, and on having the mare trotted found she was not going lame, except for the mechanical stiffness. He came to the conclusion that the spavins were years old, and as the inflammation had gone out there was no pain. The tendons of the leg were contracted. In his opinion the horse did not suffer pain and was fit for work.

Herbert Keeling Roberts, M.R.C.V.S., Bexley Heath, said the animal was suffering from enlarged spavins and slightly contracted tendons. There was no sign of pain, and the abnormalities were of old standing.

Ernest Charles Pilcher, 6 Isla Road, Plumstead, a blacksmith, said he had noticed that the animal was mechanically lame whenever he had shod it. The animal walked on its toes, and was shod with a "rolling" shoe.

Cousins said the horse had walked on its toes for seven years. The animal, which had two spavins for four years, had been in the same condition during the time he had driven it.

Jacobs also gave evidence.

Mr. Symmons said, in his opinion, the mare was suffering pain, but he was doubtful if the carman or the foreman were aware of it. The case would be dismissed. —*Kentish Independent.*

Imprisonment for Cruelty.

A bad case of cruelly ill-treating a horse came before Mr. G. H. Judd and other justices, at Brentford, on Wednesday, when Robert East, of 79, Osborne Road, South Acton, was summoned by the R.S.P.C.A. for having on divers dates cruelly ill-treated a horse by omitting to give it sufficient food, care, and attention.

P.C. 182X said that at 5.30 p.m. on January 28th he went with P.C. 163X to a field adjoining Gunnersbury Avenue, Ealing Common, and there saw a brown gelding pony, which was aged and apparently in a starved condition. He tried to lead the pony, but owing to weakness it fell down. The ground was very hard, owing to the sharp frost at the time, and there was no food or grass in the field. He informed Inspector Pleavin, of the R.S.P.C.A.

P.C. 163X corroborated, and added that the pony was nothing but a frame.

Inspector Pleavin, R.S.P.C.A., said that he went to the field and saw the pony standing against a fence. It was very old and in a poor, weak, and emaciated condition, with scarcely an ounce of flesh on its bones. It was unable to move, and was carried round to a shelter. Witness made inquiries to trace the owner, and saw his wife at Acton. She said the defendant had gone away for some days. She accompanied witness to the field, and consented to have the pony destroyed. When he returned, he found the pony had been removed about a hundred yards, and there were traces of its having been fed with hay. Subsequently defendant came to him and said things were bad with him, and he went away to try and make a bit, but gave the pony half a peck of corn before he went.

Mr. W. Hatton, veterinary surgeon, said he saw the carcass of the pony on January 29th, and made a post-mortem examination. He found a little food in the stomach, but the carcass was devoid of fat, even on the kidneys. It was also nearly bloodless. The condition of the pony, having regard to the weather, must have been extremely bad. Its coat had been cut, and he did not see how it could have kept any warmth in it. He understood the horse had been turned out since the first week in December last, and no doubt it had been getting worse since then.

The Chairman: In other words, it was starved.

Witness: Absolutely starved. A healthy horse would not have died so quickly.

Defendant said he had a fat pony and exchanged it for this one. First he kept it in a stable, and then, as it did not get on, turned it out, and that did not do it any good.

The Chairman said the Bench would be lenient, though they had the power to send defendant to prison for six months. If ever a man deserved punishment for neglecting a horse in such a disgraceful way, it was the defendant, who would have to go to prison for fourteen days with hard labour.

Royal Veterinary College.

A Deputation to Government.

The President of the Board of Agriculture and Fisheries received a deputation on Monday, Feb. 25th, who asked for on increased grant from the State to assist the Royal Veterinary College. Mr. Runciman was accompanied by Lord Lucas, Sir T. Elliott, Mr. A. W. Anstruther, and Mr. Stewart Stockman. The deputation was introduced by Lord Middleton, President of the Royal Agricultural Society, and consisted of Mr. Harold Swithinbank, Mr. W. Hunting, F.R.C.V.S., Sir John M'Fadyean (Principal), and Mr. R. A. Powys (Secretary), representing the Royal Veterinary College; and the Hon. Cecil Parker, Sir R. Cooper, and Mr. Thomas McRow, representing the Royal Agricultural Society.

Mr. Runciman and Lord Lucas, in reply, acknowledged the good work done by the College in the past and their desire to assist, as far as possible, the object of the deputation.

LINCOLNSHIRE VETERINARY MEDICAL ASSOCIATION.

The thirtieth annual meeting was held on Thursday, Feb. 15th, at "The George" Hotel, Grantham. The chair was occupied by the President, Mr. W. Grasby, M.R.C.V.S., of Daventry, and amongst those present were Messrs. F. L. Gooch, Stamford; G. Lockwood, Peterborough; T. A. Rudkin, F. Masterman, H. Sugden, Grantham; S. G. Masterman, Huntingdon; C. W. Townsend, Long Stanton, Cambs. (hon. sec. and treasurer).

The minutes were signed.

CORRESPONDENCE.

The Hon. Sec. read a letter from Prof. A. Gofton, of Edinburgh, with regard to affiliation with the National Veterinary Association, and it having been decided to take this step, Mr. F. L. Gooch and Mr. T. Rudkin, with the Hon. Sec., were appointed to represent the Lincolnshire Association on the Council of the N.V.A.

Letter from Mr. Garnet, of the National Veterinary Association, asking for individual support for the proposed International Veterinary Conference in England in 1914.

Mr. GOOCH said that Sir John M'Fadyean had expressed the opinion, from his experience of International meetings, that it would cost £3,500, and it had been decided to apply to individual members, as well as to the District Association for subscriptions, members could spread their donations over three years. He (Mr. Gooch) would undertake to collect subscriptions, and send them on to Mr. Garnet, the Treasurer.

It was agreed that Mr. Gooch should draw up a circular, and that the Secretary should send same to members invoking their personal aid.

Letter from Mr. Faithfull Davies, of Hadleigh, Suffolk, with regard to the conference to be held in Paris in October next, in which the Meat Inspectors' Association is interested, by the Société de Pathologie Comparée.

Letters from the Royal Sanitary Institute, which has fixed its annual Congress at Scarborough from July 24th to August 3rd.

Letter from Mr. Shipley, of the Victoria Benevolent Fund, asking individual contributions. The Hon. Sec. remarking that the Association at present gave 2 guineas annually.

Mr. GOOCH appealed for the sympathy of members in the matter. He was on the Council, and knew the need for the appeal, few, really, he said, knew how many deserving cases there were in the profession. He instanced the pitiable case of a widow over 70 years of age, living at Skegness, whose husband has died in a lunatic asylum. The Association were assisting her until she got her old age pension. Annual subscriptions, he said, were always deposited, the others invested.

It was decided to send the usual cheque of 2 guineas.

Mr. LANG, of Brocklesby, tendered his resignation as a member, and it was accepted.

The Secretary said Mr. Hoole, of Heckington, in sending his annual subscription, also expressed his wish to resign, but he had written him asking him to reconsider the matter. The question was left over to the next meeting, awaiting his answer.

Apologies for non-attendance were notified from Messrs. E. W. Parke, Willows, Prof. Hobday, H. C. Lalor, Prof. Penberthy, Hy. Howse, E. Wardrop, R. A. Searby, A. W. Mason, W. Hoole, T. B. Bindloss, S. G. Masterman, H. H. Truman, and R. C. Matthews.

Messrs. HY. LEACH, of Boston; R. C. MATTHEWS, of Heighington, Lincoln, and Mr. G. T. WILLOWS, Long Sutton, were balloted for as members, and duly elected.

Messrs. ERNEST WARDROP, Outwell; R. A. SEARBY Ramsey; T. G. MOON, March, and DAVID COOPER' Saxilby, were nominated for membership by Mr. C. W. Townsend.

The HON. SEC. said that he regretted that he had not been able to obtain a paper to be read that day. Mr. Lockwood had promised one, but, unfortunately, an attack of influenza had prevented him doing this. In its place, however, he had prepared for them a brief report of the Society's doings during the past year, which he thought might be interesting to not only those present but also to those members who had been unable to attend the other meetings of the Association held during the past year.

The Session 1911-1912 had, in his opinion, been a very favourable one, and he wished to take this opportunity of thanking the President for his valuable help and assistance, he knew that everything Mr. Grasby did for the Association was done willingly, and that he had spared nothing to make his Presidential year a success.

The members have a lot to thank Mr. Grasby for making the year such a successful one for their Association.

During the past year seven new members had been elected, and at the present meeting he had much pleasure in saying that he had the names of four more gentlemen wishing to join, so that by the next meeting he hoped to have fifty, if not more, names on the list of members. With such a number it is surprising we do not get better attendance at our meetings. He took this opportunity of asking those present to further assist him in obtaining more new members.

The following gentlemen have kindly read papers during the past year:—

Mr. A. W. Noel Pillers, "Notes of foot cases."

Mr. F. L. Gooch, "Some Instruments and their Uses."

Prof. F. Hobday, Demonstration, and paper upon Dr. Williams' operation for roaring in horses.

I may here state that I shall be extremely grateful for promises of future papers from members.

In presenting the balance sheet for the year, he stated that the balance at Bank at commencement of year was £20 13s. 3d. Total subscriptions to end of December, 1911, amount to £19 10s. Expenditure for year was £16 19s. 4d., leaving a balance at bank of £23 3s. 11d. Since he had made out balance sheet he had received nearly £12 for arrears and present year's subscriptions which made the present balance much bigger than at the same time last year.

Mr. GOOCH proposed a hearty vote of thanks to Mr. Townsend for his assiduity, and in the course of his remarks said that 24 members of the Association did not live in Lincolnshire, but he thought they should have larger meetings. Would it be possible, he asked, to amalgamate with any neighbouring Association.

Mr. TOWNSEND said several veterinary surgeons wished to start one at Cambridge. In his district they say they are too far away to join the Eastern Counties and that the Lincoln V.M.A. meetings are held too far off for them to attend.

The PRESIDENT attributed the small attendance to apathy. A man who could find time to go hunting, if he had a soul at all, should afford three days a year for his Association.

Mr. LOCKWOOD seconded the vote of thanks, which carried with it the adoption of the report and balance sheet, the latter having been previously audited by Mr. Rudkin.

The PRESIDENT heartily supported the motion, for, he said, he had probably come in contact with the Secretary more than any other member. Mr. Townsend had been untiring in his work for the Association. He had not only tried to get members himself, but had written to him (the President) and others to get them.

It showed he had the interests of the Association at heart. His work had been done thoroughly, and he deserved the heartiest thanks of the meeting.

The resolution was carried unanimously.

Election of Officers.

President.—Mr. Townsend proposed the name of Mr. H. H. Truman, of March, as President for the ensuing year. If they elected him he was sure they would not be sorry. He had for years been a member of their Association, and was highly esteemed in the March district. He was a magistrate and Chairman of the Urban District Council, and he was sure he would do credit to the Association.

Mr. Rudkin said he had great pleasure in seconding, as he had known Mr. Truman many years as a member of the Association.

The motion was carried with acclamation.

Vice-President.—Mr. W. W. Grasby, the retiring President, was elected, Mr. G. B. Dickinson coming out of the list automatically.

Hon. Secretary.—The Chairman proposed the re-election of Mr. Townsend, and congratulated the incoming President on retaining the services of so excellent a man.

Mr. Lockwood, in seconding, said it spoke volumes for Mr. Townsend's grit that he put in so much energy when they got such a small meeting as that.

Mr. Townsend having been duly re-elected, said he fully appreciated the honour done him. He apologised for the small attendance that day, and said it was neither his nor the President's fault. It was a pleasure to do anything for the Association, and while he was Secretary he would continue to do all he could for the Association and for its members. (App.)

Enlarging the District.

A discussion then ensued as to changing the place of the meeting once a year, it being felt that Cambridge might be tried every other year instead of Lincoln. It was pointed out that a similar experiment had been tried, and meetings held with no greater success at Louth, Market Rasen, and Grimsby, owing to the railway facilities being so inconvenient in such a large district as the Association covers. It was pointed out that March was a convenient centre, with express trains from Lincoln, and Mr. Townsend said he could ensure a good attendance from the Cambridge side if a meeting was held there.

Eventually Mr. Gooch proposed, Mr. Lockwood seconded, Mr. Rudkin supported, and it was carried that the summer meeting on the second Thursday in June, which is usually held at Peterborough, should be held at March, subject to the President's (Mr. H. H. Truman) consent.

Mr. Gooch gave notice that he would move at that meeting that the title of the Association should be changed to that of the "Lincolnshire and District Veterinary Medical Association."

Some interesting clinical cases were discussed, and some good specimens exhibited by Mr. Gooch, Mr. Rudkin, and Mr. Grasby, who, after a capital repast, was heartily thanked for the excellent way in which he had carried out the Presidential office during the year.

C. W. Townsend, Hon. Sec.

DISEASES OF ANIMALS ACTS 1894 to 1911, SUMMARY OF RETURNS.

Period.	Anthrax. Outbreaks Confirm'd	Anthrax. Outbreaks Reported	Anthrax. Animals Confirm'd	Anthrax. Animals Reported	Foot-and-Mouth Disease. Outbreaks	Foot-and-Mouth Disease. Animals.	Glanders * (including Farcy) Outbreaks	Glanders * (including Farcy) Animals.	Parasitic Mange. Outbreaks	Parasitic Mange. Animals.	Sheep Scab. Outbreaks	Swine Fever. Outbreaks.	Swine Fever. Slaughtered. *
Gt. BRITAIN. Week ended Mar. 2	23		23				9	17	113	218	8	49	545
Corresponding week in 1911	21		23				3	9			16	34	299
Corresponding week in 1910		32		39			7	16			9	15	160
Corresponding week in 1909		22		28			10	41			18	25	244
Total for 9 weeks, 1912	229		251				32	62	1201	2921	121	532	6856
Corresponding period in 1911	199		225				42	164			250	307	3369
Corresponding period in 1910		274		332			61	185			244	203	1539
Corresponding period in 1909		252		340			96	260			312	263	2060

* Counties affected, animals attacked: Essex 1, London 10, Middlesex 5, City of Edinburgh 1.

Board of Agriculture and Fisheries, Mar. 5, 1912.

	Outbreaks									
IRELAND. Week ended Mar. 2	...	...	...	...	...	...	3	9	6	22
Corresponding Week in 1911 ...	...	...	...	...	...	...	1	10	3	22
Corresponding Week in 1910 ...	...	2	...	...	...	...	...	23	...	...
Corresponding Week in 1909 ...	...	...	...	...	...	...	1	23	2	1
Total for 9 weeks, 1912 ...	1	1	...	...	...	...	23	167	27	214
Corresponding period in 1911 ...	3	3	...	...	..	...	22	169	26	481
Corresponding period in 1910 ...	4	6	...	...	...	...	17	191	6	215
Corresponding period in 1909 ...	1	1	...	...	...	...	22	165	5	13

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Mar. 4, 1912

Note.—The figures for the Current Year are approximate only.

* As Diseased or Exposed to Infection

PARLIAMENTARY.

New Bills.

In the House of Commons, on Wednesday, Feb. 28.

* * *

Dr. Chapple (Stirlingshire, Min.)—Bill to consolidate and amend enactments relating to animals and to knackers, and to make further provision with respect thereto.

Tuesday, March 5.

Mr. Barnston (Cheshire, Eddisbury, Opp.)—Bill to provide for the marking of all imported meat and agricultural produce, and for the registration of dealers in such meat.

Supply—Army Estimates.

Col. Seely (Derby, Ilkeston), in moving that the Speaker do leave the Chair for the House to go into Committee on the Army Estimates, said although he could not hope to rival his noble friend the Secretary for War in fulness of detail, he would follow his example in avoiding as far as possible bringing the affairs of the Army into what might be called party conflict.

* * * *

Transport and Horses.

His report in regard to transport and horses was very simple. The Regular Army required 44,000 horses on mobilization, in addition to those which they already had on the peace establishment. The number at one ime was 52,000, but they had saved 8,000 by adopting mechanical transport. They required 10,000 gun horses, and they knew from the census and classification which had been carried out by adjutants and remount officers that that number and much more was available. There was, however, one real difficulty. There was an ample supply of heavy draught horses, and there were just enough or rather more than just enough light horses for the purposes for which they were required on mobilization, but while there were enough horses for the guns, there did not appear to be enough in hard training. The reason for that was the disappearance of the omnibus horse. That class of horse had provided them with a vast reserve of the very kind of horse which they required. Horses would be required for the guns for many years yet, and steps would have to be taken to get over the present difficulty. He would be glad to hear any suggestions which the right hon. member for Dover might make. The classification of the 44,000 for the Regular Army was not yet as complete as they desired to make it. Arrangements would be made for the horses to be brought to the points where they would be required and as to the purchase of them. The full scheme would be completed in a very short time. The 86,000 horses which would be required for the Territorial Army would be available, but there also they would have difficulty in regard to gun horses. Arrangements were being made in regard to motor transport, and the whole scheme for mechanical transport was receiving attention.

The Royal Sanitary Institute Congress.

His Royal Highness Prince Arthur of Connaught, K.G., has consented to become Patron of the 27th Congress of the Royal Sanitary Institute to be held at York in July next.

Personal.

Storrar.—On the 25th Feb. at Rowes Cottage, Great Saughall, Lizzey, wife of James Storrar, in her 51st year.

ARMY VETERINARY SERVICE.

The undermentioned officers embarked in Transport "Rohilla" on 29th February, for a tour of of service in India: Captains W. E. Schofield, J. Nicholas.

Maj. W. D. Smith has been transferred from Bulford to the Curragh as Acting Administrative Veterinary Officer, and Major E. E. Martin from Woolwich to Bulford as Officer Commanding the Sections, Army Veterinary Corps, at that station.

OBITUARY.

Frederic Dales, M.R.C.V.S., Gainsborough, Lincs.
Graduated, N. Edin: May, 1889.

Mr. Dales died on Feb. 23rd, from acute phthisis, Aged 43 years.

John Hepton, M.R.C.V.S., Sherburn, Yorks.
Edin: April, 1890

Death occurred on Feb. 25, at the age of 68 years, from apoplexy, ensuing on diabetes mellitus.

CORRESPONDENCE.

POLICE COURT EXPERT EVIDENCE.

Sir,

In your issue of Feb. 24th the Central Association had this question up for discussion, and they then made a recommendation and appointed a committee of their own members to go as a deputation to the Chief Commissioner of Police for London.

As the question is one affecting the whole country and all our members, it seems that the proper body to deal with the subject would be the Royal College.

It would also appear that the College would, after discussion, invite the R.S.P.C.A. and kindred societies to a round table talk on the question, and then proceed to get, if possible, an interview with the Home Secretary. This is the proper one to go to, as being the head for the whole country.

The points to be put before the Home Secretary are in my judgement as follows:—

(1) Cruelty in the "greenyards" or "pounds" permitted by the police in not allowing the animal to be properly tended and fed, and in the case of the horse groomed and bedded, and in those cases where it is possible that foot disease is present the retention of the shoe.

(2) A veterinary surgeon habitually appearing in the same Court always for the prosecution. (A diplomat will be required to put this question very carefully. It is treading on thin ice. It must be put for the sake of the profession at large. All that is wanted is that all professional opinion will be given without any regard to conviction or dismissal. A veterinary witness has nothing to do with the result of the trial. He is present to speak to the condition of an animal).

(3) The appointing of veterinary referees to assist the magistrate when evidence is given of an expert kind, no matter by whom. This is the case with doctors and also in nautical cases.

(4) The stopping of an inspection by the magistrate. By producing the animal it is assumed that the magistrate has expert knowledge. He is not a magistrate, because he is an expert in any business or profession. He is there because he is a lawyer, or, if one of the great unpaid, because he has plenty of money or has given political services. Hunting's squealing mare admirably illustrates the damned absurdity of an inspection by the magistrate. In the country the horsey magistrate is still more opinionated than even Plowden and that is saying a lot.

This is a question which will be found to affect us very closely, and more so since the new act is in force. It is one which we must tackle because of internal discipline, as well as our good relations with the outside public. I hope that your colums will contain many expressions from our members, and that the Royal College will see their way to take speedy action.—Yours truly,

ST. ELLIW.

CRUELTY CASES—POLICE OR S.P.C.A.

Sir,

I enclose a report printed in *The Middlesex County Times* of a prosecution for cruelty. The circumstance to which I desire to call particular attention is that two policemen found what was considered a serious case of cruelty, and instead of proceeding in the ordinary way, they informed an R.S.P.C.A. inspector.

In this case wherin does the usefulness of R.S.P.C.A. lie? Two policemen and a veterinary surgeon are surely capable of proving a case, and the question which presents itself to one mind is—does the R.S.P.C.A. take the credit for a case of this sort, when the credit is really due to the police? —Yours faithfully,

Feb. 24. "ONLOOKER."

[*The report of this case appears on p. 576.*]

R.S.P.C.A. INSPECTORS IN COURT.

Sir,

I enclose two cuttings from a local paper giving accounts of two cruelty oases. In the one we are told that Inspectors of the R.S.P.C.A. are examined as to ability by a veterinary surgeon before being appointed, and that in consequence their word should in all cases be accepted, and that before that of a properly qualified veterinary surgeon. (A nice piece of bounce, indeed). And in the second case we see the low, mean style of cross examination an inspector sometimes adopts in attempting to discredit a professional witness. A conviction must be obtained at any cost in every case, or no good can possibly accrue. Persistent exaggeration and untrue suggestions are methods frequently employed. The defendant in a case of cruelty is frequently himself treated cruelly, but what odds when you are out for convictions if your fellow worm goes under, or if pain is allowed to continue as in the "greenyard" cases recently mentioned.

Defendants in cruelty cases have rights as well as defendants in other fields, and to regard all witnesses for the defence in these cases as hostile, perverters of the truth, or as being actuated by malice, or other sordid motives is monstrous.

I recently heard of an inspector who said he was sure a certain horse was in pain because in taking a load up a hill the animal took a zigzag course. He probably had never ridden a bicycle up an incline.—Yours truly,

F.R.C.V.S.

THE BENCH AND THE R.S.P.C.A.

At Columb Petty Sessions, before Mr. A. C. P. Willyams (in the Chair), Col. Buchanan, Col. E. Gully Bennett, Col. Prideaux-Brune, Capt. Vyvyan, Messrs. C. E. Cardew, W. Phillips, H. J. Rowse, J. Vivian, W. H. L. Shackell, W. Harvey Wells:

The Chairman said the Bench were strongly of opinion that in cases of cruelty the evidence should be substantiated by a veterinary surgeon.

Inspector Waters: Then authority is taken from the Society and its officers. It would rather tie our hands.

The Chairman: We want independent veterinary evidence.

Inspector Waters: That means that you will not convict in cases without that evidence.

The Chairman: Yes.

Capt. Vyvyan and Mr. C. E. Cardew interposed that they did not agree to this.

The Clerk said the Bench meant that in such cases where it was desirable veterinary evidence should be brought.

Inspector Waters: But you leave it at our discretion.

Mr. H. J. Rowse said they did not mean in the cases where the evidence was plain.

Inspector Waters replied that they never knew how a man would plead until he came to Court. The inspectors were not appointed unless they could satisfy a veterinary surgeon as to their knowledge. In dozens of Courts the training of the inspectors was recognised, and their word was taken.

The Chairman said he was sorry he inferred that this was the wish of all the Bench, but he believed they all wished for some substantiative evidence in these cases.

Capt. Vyvyan: We have always been ready to accept the evidence of the Inspector without the additional evidence of a veterinary surgeon.

The Chairman: Not always.

Capt. Vyvyan: The defendants have always the option of having in a veterinary if they wish to.

CRUELTY CHARGE DISMISSED.

At the East Kerrier Petty Sessions, on Wednesday, Feb. 28th, before Messrs. E. B. Beauchamp, J. D. Enys, J. S. Ford, W. F. Tremayne, and W. L. Fox, Frank Rowe, carter, of Ponsanooth, was charged with working a mare in an unfit state at St. Gluvias on February 17th, and John Martin, farmer, was charged with causing the animal to be worked.—Mr. J. G. Powell appeared for the defence.—Inspector Waters said he saw Rowe in charge of a waggon and two horses. The bay mare had two old raw wounds under the saddle, and there was blood and matter on the pad under the saddle. Rowe said he had told Mr. Martin that the mare had a bunch upon her back and asked if he should work her. Mr. Martin told him to try her in the shafts that day. Mr. Martin said the pad must have come from off another horse, and that the horse was put into the shafts because it had kicked someone the day before.—P. . Bunney corroborated, saying he considered the wounds had been there for some time.

Martin said the horse was sound when it went out in the morning, and the skin was not broken. He had two other horses in the stable which he could have used. There was a small blister about the size of a pin's head on the mare's back the night before. The roads were bad, and the work of the next day caused two small wounds about the size of halfpennies.

Rowe said it was their usual practice to work the horses with pads.

Edwin Richard Smythe, veterinary surgeon, said that he inspected the animal a week afterwards. He found two abrasions, not old wounds, because there was no depth. He had treated Mr. Martin's horses for 25 years, and he was the last man who would cause cruelty to them.

Inspector Waters: They are good clients of yours?—Yes.

And your sympathies would be with them?—Certainly not.

Is it a fact that you have made observations that you would oppose me in all cases in Falmouth or Penryn?—No. I have supported you.

The Bench dismissed the case.—*The Royal Cornwall Gazette.*

MEAT INSPECTOR IN LONDON FOR AUSTRALIA.

Sir,

In this week's *Veterinary Record* I notice a paragraph under the heading "Mr. McPhail appreciated," in which it is stated that Mr. McPhail was one of two candidates selected for an appointment in London under the Australian Commonwealth. Such is not the case for, as a matter of fact, out of some seventy applicants not two but six were selected including Mr. McPhail and myself. But the post was also advertised in the Colonies at the same time as in this country, and the deciding authority—namely, the Australian Government at Melbourne—finally selected and appointed a Melbourne gentleman.—Yours faithfully,

THOMAS PARKER, F.R.C.V.S.

Newcastle-upon-Tyne.